BEFORE
THE PUBLIC UTILITIES COMMISSION OF OHIO

In the Matter of the Application of Aqua Ohio, Inc. to Increase Rates for Water Service.	)))	Case No. 22-1094-WW-AIR

DIRECT TESTIMONY
OF
CONSTANCE E. HEPPENSTALL
ON BEHALF OF
AQUA OHIO, INC.

    ‾‾‾   Management policies, practice and organization

    ‾‾‾   Operating income

    ‾‾‾   Rate base

    <u>X</u>   Allocations

    ‾‾‾   Rate of return

    ‾‾‾   Rates and tariffs

    ‾‾‾   Other

1   **Direct Testimony of**

2   **Constance E. Heppenstall**

3   **I.   WITNESS INTRODUCTION**

4 **Q1.   Please state your name and address.**

5 A1.   My name is Constance E. Heppenstall. My business address is 1010 Adams

6   Avenue, Audubon, Pennsylvania.

7 **Q2.   By whom are you employed?**

8 A2.   I am employed by Gannett Fleming Valuation and Rate Consultants, LLC as Senior

9   Project Manager. My duties and responsibilities include the preparation of

10   accounting and financial data for revenue requirement and cash working capital

11   claims, the allocation of cost of service to customer classifications, and the design of

12   customer rates in support of public utility rate filings.

13 **Q3.   Have you previously testified in rate case proceedings before regulatory**

14   **agencies?**

15 A3.   Yes. I have testified before the Public Utilities Commission of Ohio, Pennsylvania

16   Public Utility Commission, the Arizona Corporation Commission, the Kentucky

17   Public Service Commission, the Virginia State Corporate Commission, the Missouri

18   Public Service Commission, the State of Nevada Public Utilities Commission, the

19   Hawaii Public Service Commission, the West Virginia Public Service Commission,

20   the Indiana Utility Regulatory Commission, the New Jersey Board of Public

21   Utilities, and the California Public Utility Commission concerning revenue

22   requirements, cost of service allocation and rate design. A list of cases in which I

23   have testified is attached to my testimony.

24

1	**Q4.**	**What is your educational background?**
2	A4.	I have a Bachelor of Arts in Economics from the University of Virginia,
3		Charlottesville, Virginia and a Master of Science in Industrial Administration from
4		the Tepper School of Business at Carnegie-Mellon University, Pittsburgh,
5		Pennsylvania.
6	**Q5.**	**Do you have any professional affiliations?**
7	A5.	Yes. I am a member of the American Water Works Association, the National
8		Association of Water Companies and the Pennsylvania Municipal Authorities
9		Association.
10	**Q6.**	**Briefly describe your work experience.**
11	A6.	I joined the Valuation and Rate Division of Gannett Fleming, Inc. in August 2006, as
12		a Rate Analyst and was promoted to my current position in 2012. Prior to my
13		employment at Gannett Fleming, Inc., I was a Vice President of PriMuni, LLP where
14		I developed financial analyses to test proprietary software in order to ensure its
15		pricing accuracy in accordance with securities industry's conventions. From 1987 to
16		2001, I was employed by Commonwealth Securities and Investments, Inc. as a
17		public finance professional where I created and implemented financial models for
18		public finance clients to create debt structures to meet clients' needs. From 1986 to
19		1987, I was a public finance associate with Mellon Capital Markets.
20	**Q7.**	**What is the purpose of your testimony in this proceeding?**
21	A7.	The purpose of my testimony is to explain Aqua Ohio, Inc.'s (Company) cost of
22		service allocation studies for the water operations, set forth in Schedule E-3.2 of the
23		Company's filing. This schedule presents the results of the cost of service study I
24		performed for the Company's water operations. In response to the stipulation in

1   Docket No. 21-595-WW-AIR, I am supplying the cost of service study based on the

2   Commodity Demand Method as described in the AWWA M1 Manual. In addition,

3   in Appendix A to Schedule E-3.2, I am supplying the cost of service study based on

4   the Base Extra Capacity Method of allocation. Finally, I am supplying a Customer

5   Demand Study, based on the methodology described in Appendix A of the AWWA

6   M1 Manual, to determine maximum day and maximum hour demand factors by

7   class to be used in the cost of service studies. This Customer Demand Study is

8   included in Appendix B of Schedule E-3.2.

9   **II.**   **COMMODITY DEMAND COST OF SERVICE ALLOCATION – WATER**

10   **OPERATIONS**

11 **Q8.**   **Briefly describe the purpose of your cost allocation study for the water**

12   **operations.**

13 A8.   The purpose of the study was to allocate the total cost of service, which is the total

14   revenue requirement for the combined service areas of the Company, to the several

15   customer classifications. In the study, the total costs were allocated to the

16   residential, commercial, industrial, public authorities, sales for resale, and private

17   fire protection classifications in accordance with generally accepted principles and

18   procedures using the Commodity Demand Method of allocation. The cost of service

19   allocation results in indications of the relative cost responsibilities of each class of

20   customers. The allocated cost of service is one of several criteria appropriate for

21   consideration in designing customer rates to produce the required revenues. The

22   results of my allocation of the pro forma cost of service for the test year ended June

23   30, 2023, compared to the revenues under present and proposed rates as of that date

24   are presented in the study.

Q9. **Should a separate cost of service study be performed for each of the Company's individual service areas?**

A9.   No, as the Company operates the water system as a unified system. All areas supply a similar service to its water customers and rely on a centralized work force for billing, accounting, engineering, administration, and regulatory matters. In addition, all the areas rely on a common source of funds for financing working capital and plant construction. Inasmuch as the costs of operation are related to functions in which the operating characteristics are the same, the use of a single cost of service study for the entire system is appropriate.

Q10. **Please describe the method of cost allocation that was used in your study.**

A10. The Commodity Demand method of allocation, as described in 2017 and prior Water Rates Manuals published by the American Water Works Association (AWWA), was used to allocate the pro forma costs. The Commodity Demand Method is a recognized method for allocating the cost of providing water service to customer classifications in proportion to the classifications' use of the commodity, facilities, and services.

Q11. **Please describe the procedure you used to perform the cost allocation study presented in Schedule E-3.2 of the Company's filing.**

A11. Each identified classification of cost in the pro forma cost of service was allocated to the customer classifications using appropriate factors. These allocations are presented in Schedule E-3.2b. The items of cost, which include operation and maintenance expenses, depreciation expense, taxes and income available for return, are identified in column 1 of Schedule E-3.2b. The cost of each item, shown in column 3, is allocated to the several customer classifications based on allocation

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1 factors referenced in column 2. The development of the allocation factors is

2 presented in Schedule E-3.2c. I will use some of the larger cost items to illustrate

3 the principles and considerations used in the cost allocation methodology.

4 Purchased electric power, treatment chemicals and waste disposal are

5 examples of costs that tend to vary with the amount of water consumed and are thus

6 considered commodity costs. They are allocated to the several customer classifica-

7 tions in direct proportion to the average daily consumption of those classifications

8 using Factor 1. The development of Factor 1 is shown in Schedule E-3.2c and

9 includes an estimate of consumption for unmetered customers. Other source of

10 supply, water treatment and transmission costs are associated with meeting usage

11 requirements in excess of the average, generally to meet maximum day

12 requirements. Costs of this nature were allocated to customer classifications

13 partially as maximum day costs, in proportion to maximum day capacity, and, in the

14 case of certain pumping stations and transmission mains, partially as fire protection

15 costs, through the use of Factors 2 and 3. The development of the allocation factors,

16 referenced as Factors 2 and 3, is shown in Schedule E-3.2c.

17 Costs associated with storage facilities and the capital costs of distribution

18 mains were allocated on the basis of maximum hour extra demand, including the

19 demand for fire protection service, because these facilities are designed to meet

20 maximum hour and fire demand requirements. The development of the factors,

21 referenced as Factors 4 and 5, used for these allocations is shown in Schedule E-

22 3.2c.

23 Fire demand costs were allocated to public and private fire protection service

24 in proportion to the relative potential demands on the system by public fire hydrants

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1   and private service lines as presented in Schedule E-3.2e. The portion of fire

2   demand allocated to Public Fire Protection is reallocated to Residential, Commercial,

3   Industrial, and Public Authority classifications based on meter equivalents.

4   Costs associated with pumping facilities and the operation and maintenance

5   of mains were allocated on combined bases of maximum day and maximum hour

6   capacity because these facilities serve both functions. For pumping facilities, the

7   relative weightings of Factor 2 (maximum day), Factor 3 (maximum day and fire)

8   and Factor 4 (maximum hour) were based on estimated proportion serving maximum

9   day, maximum day and fire, and maximum hour functions. The development of this

10   weighted factor, referenced as Factor 6.

11   For operation and maintenance of mains, the relative weightings of Factor 3

12   (maximum day and fire) and Factor 4 (maximum hour) were based on a sample of

13   the footage of transmission and distribution mains. For cost allocation purposes,

14   mains 10-inch and larger were classified as serving a transmission function and

15   mains less than 10-inch were classified as serving a distribution function.   The

16   development of this weighted factor, referenced as Factor 7. Costs associated with

17   public fire hydrants were assigned to Residential, Commercial, Industrial and Public

18   Authority classes based on meter equivalents, as shown in Factor 8.

19   Costs associated with meters were allocated to customer classifications in

20   proportion to the capacity requirements of the sizes and quantities of meters serving

21   each classification. The development of the factor for meters, referenced as Factor

22   9. Factor 10, Allocation of Services, was developed in a similar manner as Factor 9.

23   Costs for customer accounting, billing and collecting were allocated on the

24   basis of the number of bills rendered for each classification.   Costs related to

6

1   uncollectible accounts and customer related management fees are allocated based on

2   the number of customers. The development of these factors, referenced as Factors

3   13 and 20.

4   Administrative and general costs were allocated on the basis of allocated

5   direct costs, excluding those costs such as purchased water, power, chemicals and

6   waste disposal which require little administrative and general expense.   The

7   development of factors for this allocation, referenced as Factor 15.

8   Annual depreciation accruals were allocated on the basis of the function of

9   the facilities represented by the depreciation expense for each depreciable plant

10   account. The original cost less depreciation of utility plant in service was similarly

11   allocated for the purpose of developing factors, referenced as Factor 18, for allocat-

12   ing items such as income taxes and return.

13   Factors 15 and 18, as well as Factors 11, 12, 16, 17 and 19, are composite

14   allocation factors. These factors are based on the result of allocating other costs and

15   are computed internally in the cost allocation program. Refer to Schedule E-3.2c for

16   a description of the bases for each composite allocation factor.

17   **Q12. What was the source of the total cost of service data set forth in Column 3 of**

18   **Schedule B?**

19   A12. The pro forma costs of service were furnished by the Company and are set forth in

20   various Company schedules sponsored by Aqua Ohio witness Bradley H. Shaw.

21   **Q13. Referring to Schedule E-3.2c, please explain the source of system maximum day**

22   **and maximum hour ratios used in the development of factors referenced as**

23   **Factors 2, 3 and 4.**

1   A13.   The ratios were based on a review of historic Company data. The maximum day

2   ratio of 1.5 times the average day approximates the ratio of maximum daily send-out

3   experienced by the Company in recent years. The maximum hour ratio of 2.25 times

4   the average hour was estimated based on the relationship of system maximum hour

5   ratios compared to system maximum day ratios for other similar systems.

6   **Q14.   What factors were considered in estimating the maximum day extra capacity**

7   **and maximum hour extra capacity demands used for the customer**

8   **classifications in the development of Factors 2, 3 and 4?**

9   A14.   The estimated demands were based on the Customer Demand Study attached as

10   Appendix B to Schedule E-3.2. In response to the stipulation in Docket No. 21-595-

11   WW-AIR, the Company performed a Customer Demand Study based on a

12   methodology that follows the recommendations found in the Appendix A of the

13   AWWA M1 Manual. These factors are different than those used in the Company's

14   prior rate cases.

15   **Q15.   Please describe the methodology Customer Demand Study as presented in**

16   **Appendix A of the AWWA Manual M1.**

17   A15.   This method uses data readily available to the Company for estimating the non-

18   coincident capacity demand factor for each customer class. The Company used for

19   the analysis the monthly consumption by class for the years ended June 30, 2021,

20   and 2022 as shown in Appendix B, Schedule 3.   For each class, the maximum

21   month usage per bill for each year was determined. From this data, the average day

22   for the maximum month (ADMM) is calculated. The calculation of the ADMM uses

23   the total flow for the maximum month divided by the bill days for that peak month.

24   See Appendix B, Schedule 2, column 3.   The ADMM was then divided by the

1   average day (AD = total annual usage divided by 365) to determine the minimum

2   maximum day peaking factor for each class as shown in column 5 of Appendix B,

3   Schedule 2.

4   This minimum peaking factor is then adjusted by the System Maximum Day divided

5   by the ADMM for the entire system (System MD/ADMM) and a weekly usage

6   adjustment by class to find the Maximum Day Ratio for each class as seen in

7   Appendix B, Schedule 2, Column 8. The System MD/ADMM ratio provides an

8   approximation of the relationship between the non-coincident maximum day and

9   ADMM/AD and is a useful adjustment to estimating the true non-coincident

10   maximum day peaking factor by class. The calculation of the system maximum

11   day/ADMM is shown in Appendix B, Schedule 4. The weekly adjustment factor by

12   class is used to acknowledge that each class will have a daily fluctuation in usage

13   over the maximum month.   The Commercial and Public Authority classes are

14   adjusted by 1.17, which acknowledges that these customers mostly use water 6 out

15   of 7 days (7/6=1.17). The Industrial and Sales for Resale classes are adjusted by

16   1.00, acknowledging that these customers use water seven days a week.   The

17   Residential class is adjusted by 1.35 as this class has the most variation in water use

18   during the month. As stated above, the results of this calculation for each year are in

19   Appendix B, Schedule 2 column 8. The maximum ratio found over the two years of

20   the analysis is then applied in both cost of service studies.   These ratios are

21   summarized in Appendix B, Schedule 1. For the purposes of the cost of service

22   study, these ratios are rounded to the nearest tenth.

23   The non-coincident maximum hour ratios by class are calculated based on

24   the maximum day ratios derived above. Per the AWWA M1 manual, appropriate

1		ratios to use are 1.66 for all but the Industrial and Sales for Resale classes and 1.35
2		for the Industrial and Sales for Resale classes. The calculation of the maximum hour
3		ratios used in the cost of service studies are shown in Appendix B, Schedule 1.

4 **Q16. Have you summarized the results of your cost allocation study?**

5 A16. Yes. The results are summarized in columns 1, 2 and 3 of Schedule E-3.2a. Column

6 2 sets forth the total allocated pro forma cost of service for the test year June 30,

7 2023, for each customer classification identified in column 1. Column 3 presents

8 each customer classification's cost responsibility as a percent of the total cost.

9 **Q17. Have you compared these cost responsibilities with the proportionate revenue**

10 **under existing rates for each customer classification?**

11 A17. Yes. A comparison of the allocated cost responsibilities and the percentage revenue

12 under existing rates can be made by comparing columns 3 and 5 of Schedule E-3.2a.

13 A similar comparison of the percentage cost responsibilities (relative cost of service)

14 and the percentage of pro forma revenues (relative revenues) under proposed rates

15 can be made by comparing columns 3 and 7 of Schedule E-3.2a. This comparison

16 shows that revenues under proposed rates generally move toward the indicated cost

17 of service. It should be emphasized that the Cost of Service Study is used as one of

18 the guidelines for rate design. A Cost of Service Study presents parameters for

19 designing rates. Designed rates rarely match exactly the rates that would be derived

20 strictly and exclusively from the results of the Cost of Service Study. For a detailed

21 discussion of proposed rates and rate design, please refer to the testimony of

22 Company witness Dan Franceski.

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1   **III.   BASE EXTRA CAPACITY COST OF SERVICE ALLOCATION – WATER**

2   **OPERATIONS**

3   **Q18.   Please describe the Base Extra Capacity Method of allocation of costs as**

4   **supplied in Appendix A of Schedule E-3.2.**

5   A18.   The base-extra capacity method, as described in 2017 and prior Water Rates

6   Manuals published by the American Water Works Association (AWWA), is used to

7   allocate the pro forma costs. Base extra capacity is a recognized method for

8   allocating the cost of providing water service to customer classifications in

9   proportion to the classifications' use of the commodity, facilities, and services. It is

10   generally accepted as a sound method for allocating the cost of water service and

11   was used by the Company in the previous rate filings.

12   **Q19.   Why has the Company supplied an additional cost of service study using the**

13   **Base Extra Capacity Methodology, as described in the AWWA M1 Manual?**

14   A19.   In the stipulation of Company's prior rate case, the Company agreed to present the

15   Commodity Demand Method for its filed cost of service study. However, the Base

16   Extra Capacity Method is included as well as this methodology was used in prior

17   Company rate cases.

18   **Q20.   Please describe the methodology used for the Base Extra Capacity Cost of**

19   **Service Study supplied as Appendix A to Schedule E-3.2.**

20   A20.   The model for the Base Extra Capacity Cost of Service Study is similar to the model

21   provided for the Commodity Demand Cost of Service Study. However, instead of

22   allocating costs to the commodity and demand functions, the study allocates costs to

23   the base and extra capacity functions. Purchased electric power, treatment chemicals

24   and waste disposal are examples of costs that tend to vary with the amount of water

consumed and are thus considered base costs. They are allocated to the several

customer classifications in direct proportion to the average daily consumption of

those classifications using Factor 1. The development of Factor 1 is shown in

Appendix A-Schedule E-3.2c and includes an estimate of consumption for

unmetered customers. Other source of supply, water treatment and transmission

costs are associated with meeting usage requirements in excess of the average,

generally to meet maximum day requirements. Costs of this nature were allocated to

customer classifications partially as base costs, proportional to average daily

consumption, partially as maximum day extra capacity costs, in proportion to

maximum day extra capacity, and, in the case of certain pumping stations and

transmission mains, partially as fire protection costs, through the use of Factors 2

and 3. The development of the allocation factors, referenced as Factors 2 and 3, is

shown in Appendix A-Schedule E-3.2c.

Costs associated with storage facilities and the capital costs of distribution

mains were allocated partly on the basis of average consumption and partly on the

basis of maximum hour extra demand, including the demand for fire protection

service, because these facilities are designed to meet maximum hour and fire

demand requirements. The development of the factors, referenced as Factors 4 and

5, used for these allocations is shown in Appendix A-Schedule E-3.2c.

Fire demand costs were allocated to public and private fire protection service

in proportion to the relative potential demands on the system by public fire hydrants

and private service lines as presented in Schedule E-3.2e. The portion of fire

demand allocated to Public Fire Protection is reallocated to Residential, Commercial,

Industrial, and Public Authority classifications based on meter equivalents.

12

Costs associated with pumping facilities and the operation and maintenance of mains were allocated on combined bases of maximum day and maximum hour extra capacity because these facilities serve both functions. For pumping facilities, the relative weightings of Factor 2 (maximum day), Factor 3 (maximum day and fire) and Factor 4 (maximum hour) were based on estimated proportion serving maximum day, maximum day and fire and maximum hour functions. The development of this weighted factor, referenced as Factor 6.

For operation and maintenance of mains, the relative weightings of Factor 3 (maximum day and fire) and Factor 4 (maximum hour) were based on a sample of the footage of transmission and distribution mains. For cost allocation purposes, mains 10-inch and larger were classified as serving a transmission function and mains less than 10-inch were classified as serving a distribution function. The development of this weighted factor, referenced as Factor 7. Costs associated with public fire hydrants were assigned to Residential, Commercial, Industrial and Public Authority classes based on meter equivalents, as shown in Factor 8.

Costs associated with meters were allocated to customer classifications in proportion to the capacity requirements of the sizes and quantities of meters serving each classification. The development of the factor for meters, referenced as Factor 9. Factor 10, Allocation of Services, was developed in a similar manner as Factor 9.

Costs for customer accounting, billing and collecting were allocated on the basis of the number of bills rendered for each classification. Costs related to uncollectible accounts and customer related management fees are allocated based on the number of customers. The development of these factors, referenced as Factors 13 and 20.

1   Administrative and general costs were allocated on the basis of allocated

2   direct costs, excluding those costs such as purchased water, power, chemicals and

3   waste disposal which require little administrative and general expense.   The

4   development of factors for this allocation, referenced as Factor 15.

5   Annual depreciation accruals were allocated on the basis of the function of

6   the facilities represented by the depreciation expense for each depreciable plant

7   account. The original cost less depreciation of utility plant in service was similarly

8   allocated for the purpose of developing factors, referenced as Factor 18, for allocat-

9   ing items such as income taxes and return.

10   Factors 15 and 18, as well as Factors 11, 12, 16, 17 and 19, are composite

11   allocation factors. These factors are based on the result of allocating other costs and

12   are computed internally in the cost allocation program.   Refer to Appendix A-

13   Schedule E-3.2c for a description of the bases for each composite allocation factor.

14 **Q21. Are the results of the two cost of service studies similar?**

15 A21. Yes, the differences in percentage allocation by customer class are less than 1%.

16 **Q22. Which allocation methodology do you recommend?**

17 A22. I recommend the Base Extra Capacity method as this method, in my experience, is

18   the most commonly used method in the water industry. The only state that I am

19   aware of that recommends the Commodity Demand Method of allocation of costs is

20   the State of Arizona. The public utility commissions of the States of New Jersey,

21   Illinois, Missouri, Indiana, West Virginia, and the Commonwealths of Kentucky,

22   Pennsylvania and Virginia all approve the use of the Base Extra Capacity method to

23   allocate costs by customer class for water utilities.

24

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1   **Q23.   Does this conclude your direct testimony?**

2   A23.   Yes, it does.

CERTIFICATE OF SERVICE

I hereby certify that a copy of the Direct Testimony of Constance Heppenstall was served

by electronic mail to the following persons on this 13th of January 2023:

John Jones
Chief, Public Utilities Section
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/s Nicole R. Woods
Nicole R. Woods
One of the Attorneys for Aqua Ohio, Inc.

CONSTANCE E. HEPPENSTALL – LIST OF CASES TESTIFIED

	Year	Jurisdiction	Docket No.	Client/Utility	Subject
1.	2010	AZ CC	W-01303A-09-0343 and SW-01303A-09-0343	Arizona American Water Company	Rate Consolidation
2.	2010	PA PUC	R-2010-2179103	City of Lancaster – Bureau of Water	Revenue Requirements
3.	2012	PA PUC	R-2012-2311725	Hanover Borough	Cost of Service/Revenue Requirements
4.	2012	PA PUC	R-2012-2310366	City of Lancaster – Sewer Fund	Revenue Requirements
5.	2013	PA PUC	R-2013-2350509	City of DuBois – Bureau of Water	Revenue Requirements
6.	2013	PA PUC	R-2013-2390244	City of Bethlehem – Bureau of Water	Revenue Requirements
7.	2014	PA PUC	R-2014-2418872	City of Lancaster – Bureau of Water	Revenue Requirements
8.	2014	PA PUC	R-2014-2428304	Hanover Borough	Revenue and Revenue Requirements
9.	2015	KY PSC	Case No.2015-000143	Northern Kentucky Water District	Cost of Service
10.	2016	PA PUC	R-2016-2554150	City of DuBois – Bureau of Water	Cost of Service/Revenue Requirements
11.	2016	AZ CC	WS-01303A-16-0145	EPCOR Water Arizona, Inc.	Cost of Service/Rate Design
12.	2017	MO PSC	WR-2017-0285	Missouri-American Water Company	Cost of Service/Rate Design
13.	2017	MO PSC	SR-2017-0286	Missouri-American Water Company	Cost of Service/Rate Design
14.	2017	VA SCC	PUR-2017-00082	Aqua Virginia, Inc	Cost of Service
15.	2017	AZ CC	WS-01303A-17-0257	EPCOR Water Arizona, Inc	Cost of Service/Rate Design
16.	2017	HI PUC	2017-0446	Hana Water Systems, LLC – North	Cost of Service/Rate Design
17.	2017	HI PUC	2017-0447	Hana Water Systems, LLC – South	Cost of Service/Rate Design
18.	2018	PA PUC	2018-200208	SUEZ Water Pennsylvania	Revenue Requirements
19.	2018	KY PSC	2018-00208	Water Service Corp of KY	Cost of Service/Rate Design
20.	2018	WV PSC	18-0573-W-42t	West Virginia American Water Co.	Cost of Service
21.	2018	IN IRC	50208	Indiana American Water Company	Cost of Service/Demand Study
22.	2018	KY PSC	2018-00291	Northern Kentucky Water District	Cost of Service/Rate Design
23.	2018	KY PSC	2018-0358	Kentucky American Water	Cost of Service/Rate Design
24.	2019	PA PUC	R-2019-3006904	Newtown Artesian Water Co.	Revenue Reqmts./Rate Design
25.	2019	PA PUC	R-2019-3010955	City of Lancaster – Sewer Fund	Rev. Reqmts./Cost of Service/Rates
26.	2020	PA PUC	R-2020-3017206	Philadelphia Gas Works	Cost of Service
27.	2020	PA PUC	R-2020-3019369	Pennsylvania American Water Co.	Cost of Service/Rate Design
28.	2020	PA PUC	R-2020-3019371	Pennsylvania American Water Co.	Cost of Service/Rate Design
29.	2020	PA PUC	R-2020-3020256	City of Bethlehem	Rev. Reqmts./Cost of Service/Rates
30.	2020	CA PUC	A2101003	San Jose Water Company	Rate Design
31.	2020	VA SCC	PUR-2020-00106	Aqua Virginia, Inc.	Cost of Service
32.	2021	PUCO	21-0595-WW-AIR	Aqua Ohio, Inc	Cost of Service
33.	2021	PUCO	21-0596-ST-AIR	Aqua Ohio, Inc	Cost of Service
34.	2021	PA PUC	R-2021-3026116	Hanover Borough	Cost of Service
35.	2021	NJ BPU	WR21071007	Atlantic City Sewerage Co.	Rev. Reqmts./Cost of Service/Rates
36.	2021	PA PUC	R-2021-3027385	Aqua Pennsylvania	Cost of Service/Rate Design
37.	2021	PA PUC	R-2021-3027386	Aqua Pennsylvania	Cost of Service/Rate Design
38.	2021	PA PUC	R-2021-3026682	City of Lancaster – Bureau of Water	Cost of Service/Rate Design
39.	2021	NV PUC	21-12025	Great Basin Water Company	Cost of Service/Rate Design
40.	2022	PA PUC	R-2021-3030218	UGI Utilities, Inc. – Gas Division	Cost of Service
41.	2022	PA PUC	R-2022-3031704	Borough of Ambler	Rev. Req./Rate Design
42.	2022	PA PUC	R-2022-30316732	Pennsylvania American Water	Cost of Service
43.	2022	PA PUC	R-2022-3031340	York Water Company	Cost of Service/Rate Design
44.	2022	PA PUC	R-2022-3032806	York Water Company	Cost of Service/Rate Design
45.	2022	KY PSC	2022-00161	Northern Kentucky Water District	Cost of Service/Rate Design

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Summary: Testimony Direct Testimony of Constance Heppenstall electronically filed by Ms. Nicole R. Woods on behalf of Aqua Ohio, Inc.